

# State of Surrey Butterflies in 2015

The weather for 2015 was characterised by a typical Spring, a little drier than normal, which resulted in those butterflies that overwinter as pupae emerging at a similar time as for 2014. The summer was cooler and wetter than normal (especially at the beginning of August), and this resulted in those butterflies that overwinter as ovum, typically emerging later than 2014. The weather improved in September and October, but by then butterfly numbers were decidedly down.

Numbers of adults is based on records received, with no variation in recording effort taken into account. This should not be confused with abundance trends from formal analysis of transect data. However, it does give a rough indication of how each species is fairing.

## Papilionidae – The Swallowtails

There were no sightings of the **Continental Swallowtail** in 2015.

## Hesperiidae – The skippers

**Dingy Skipper** from 16<sup>th</sup> April to 2<sup>nd</sup> July, and singletons from a partial second brood at four sites between 31<sup>st</sup> July and 17<sup>th</sup> August. Peak numbers during May. Numbers similar to 2014.

**Grizzled Skipper** from 15<sup>th</sup> April to 24<sup>th</sup> June, with numbers similar to last few years, and only seen in small numbers. Peak flight period 21<sup>st</sup> April to 30<sup>th</sup> May, about 4 days later than 2014.

**Essex Skipper** from 25<sup>th</sup> June to 19<sup>th</sup> August, with a singleton on 29<sup>th</sup> August. Numbers slightly better than 2014. However, true state is hidden as most records still don't distinguish between Small and Essex Skipper.

**Small Skipper** from 16<sup>th</sup> June to 21<sup>st</sup> August. Numbers similar to 2014.

**Silver-spotted Skipper** an early sighting on 14<sup>th</sup> July, with main flight period from 25<sup>th</sup> July and throughout August, with a few stragglers until 15<sup>th</sup> September. Numbers above last eleven years, below bumper year of 2003. Peak flight period commencing about 12 days later than 2014 and shorter by 2 weeks than 2014.

**Large Skipper** an early sighting on 17<sup>th</sup> May, rest from 30<sup>th</sup> May to 28<sup>th</sup> August. Numbers similar to 2014.

## Pieridea – The Whites & Yellows

**Wood White** small first brood from 4<sup>th</sup> May to 17<sup>th</sup> June, and a bigger second brood 6<sup>th</sup> July to 28<sup>th</sup> August. The best year since 2011, although still below the numbers recorded in 2003-4. First Brood peak flight period about 15 days later than 2014.

**Orange-tip** from 6<sup>th</sup> April to mid-June with a few stragglers to 6<sup>th</sup> July. Fewer recorded than 2014 but better than 2012-13. Peak flight period last two weeks in April similar to 2014, despite a later first appearance.

**Large White** from 7<sup>th</sup> April to 11<sup>th</sup> October, with peak numbers seen between July and August. Numbers above average and improved from 2014, but still below the large numbers in 2013.

**Small White** from 6<sup>th</sup> April to 11<sup>th</sup> October, with an early sighting on 4<sup>th</sup> March, and a late sighting on 12<sup>th</sup> November. Numbers average and improved from 2014, but still below the large numbers in 2013.

**Green-veined White** from 6<sup>th</sup> April to 29<sup>th</sup> September, with peak numbers on 26<sup>th</sup> June and during the first three weeks of August. Numbers slightly below 2014.

**Clouded Yellow** numbers were low in 2015 with only 21 recorded, compared with 128 in 2014 and 276 in 2013. First seen on 13<sup>th</sup> May, and last hanging until 26<sup>th</sup> October suggesting local breeding.

**Brimstone** was first seen on 25<sup>th</sup> February. The 2015 brood emerged in mid-July, and by September most were entering hibernation, while a few were seen as late as 28<sup>th</sup> December. The majority of the records from the North Downs, and the least records from the Weald Clay, probably reflecting under-recording. Another good year, with numbers well above the long term average, and slightly up on 2014.

## Nymphalidae – The Browns, Fritillaries & Aristocrats

**Speckled Wood** from 5<sup>th</sup> April to 27<sup>th</sup> October. Numbers about average, a little lower than 2014.

**Small Heath** from 22<sup>nd</sup> April to 11<sup>th</sup> October with a later sighting on 27<sup>th</sup> October. Numbers slightly better than 2014, but still below 2011-13 numbers.

**Ringlet** first recorded on 28<sup>th</sup> May, and elsewhere from 10<sup>th</sup> June to 29<sup>th</sup> August, with greatest numbers between 24<sup>th</sup> June and 20<sup>th</sup> July. Another great year, slightly down on 2014, but well above the long term average.

**Meadow Brown** from 1<sup>st</sup> June to 2<sup>nd</sup> November, although main flight period was over by 11<sup>th</sup> October. Numbers still improving since the low of 2010.

**Gatekeeper** or Hedge Brown from 23<sup>rd</sup> June to 19<sup>th</sup> September, with peak numbers between mid-July to mid-August. Best year since 1996.

**Marbled White** from 3<sup>rd</sup> June to 16<sup>th</sup> August, with a couple stragglers lasting until 28<sup>th</sup> August. Another bumper year, well above the long term average.

**Grayling** from 6<sup>th</sup> July to 17<sup>th</sup> September. Peak flight period from mid-July to early August. Numbers better than 2014, but still below the bumper year of 2006.

**Silver-washed Fritillary** an early female on 19<sup>th</sup> June, rest from 24<sup>th</sup> June to 20<sup>th</sup> September. Another bumper year, improving on 2014 and 2006 numbers.

**Dark Green Fritillaries** from 17<sup>th</sup> June to 22<sup>nd</sup> August, generally small numbers everywhere, except at Newlands Corner where peak numbers of 30 were seen between 26 June and 10 July. An unexpected sighting in Castle Green Chobham, backed up by a photograph, well away from known populations. Overall numbers slightly below 2013 and 2014, which are still well above numbers for previous years.

**White Admiral** from 19<sup>th</sup> June to 8<sup>th</sup> August. Numbers slightly above the previous two years.

**Purple Emperor** from 29<sup>th</sup> June to 1<sup>st</sup> August. Numbers recorded were typical for the year at 72, below the bumper year of 2013 - 181 and above the lows of 2012 - 13. A butterfly that needs to be properly monitored to understand any changes in abundance.

**Red Admiral** welcomed in the New Year in Guildford, and there were sightings for every month of the year, with the last on 23<sup>rd</sup> December. Peak sightings (max. 10) in March and June through to August. Good numbers recorded, slightly lower than 2014.

**Painted Lady** was the best year since the last large migration in 2009. One attempting to over-winter was recorded on 13<sup>th</sup> January, but would not have survived the frosts. The first migrant on 27<sup>th</sup> April, with the main migration arriving on 11<sup>th</sup> May. Second generation from mid-July onwards. The last of

the season on 26<sup>th</sup> September. Numbers compared with previous years 2009 – 4045, 2013 – 372, 2014 – 234 and 2015 – 596. Not quite the large migration as was predicted at the beginning of the year.

**Peacock** a few were seen as early as 9<sup>th</sup> February and onwards, with the main emergence occurring from 27<sup>th</sup> March. Peak hibernators seen from 7<sup>th</sup> April to 24<sup>th</sup> May, and new brood between 20<sup>th</sup> July and 5<sup>th</sup> August. All had entered hibernation by 8<sup>th</sup> October, and one recorded on 18<sup>th</sup> December. Numbers slightly down on 2014 and the peak in 2013m but still well above the long term average.

**Small Tortoiseshell** early sightings on 9<sup>th</sup> and 17<sup>th</sup> February; main flight period 4<sup>th</sup> March to 30<sup>th</sup> September, with a late sighting on 28<sup>th</sup> October. Peak numbers seen 7<sup>th</sup>, 14<sup>th</sup>, 18<sup>th</sup> April, 17<sup>th</sup> June and 5<sup>th</sup>, 22<sup>nd</sup> July. Numbers down from 2014, but still significantly above the lows of 2005-12.

**Comma** was first seen on 7<sup>th</sup> March and last on 27<sup>th</sup> October, with numbers declining in mid-June before picking up in late June. A Comma was found indoors on 31<sup>st</sup> December. Good numbers similar to 2014.

**Glanville Fritillary** larvae were found at Hutchinson Bank on 27<sup>th</sup> April, with the first Adults emerging on 17<sup>th</sup> May and flying until 11<sup>th</sup> June. Up to 14 were seen at Wrecclesham on 7<sup>th</sup> and 11<sup>th</sup> June contradicting premature reports last year of their demise at the site. Best year so far.

## Lycaenidae – The Coppers, Hairstreaks & Blues

**Small Copper** an early sighting on 14<sup>th</sup> April, rest from 30<sup>th</sup> April to 27<sup>th</sup> October. There were at least three overlapping generations, the first April to May, the second July to August, and the third September to October. Numbers lower than previous thirteen years, but still significantly better than 2000-02.

**Brown Hairstreak** flying from 29<sup>th</sup> July to 11<sup>th</sup> October. A huge effort from a few people carrying out egg surveys during the winter 2015/16 has changed the distribution map for the species, although still much needs to be done. The first transects for Brown hairstreak have been setup so numbers can be monitored in future years.

**Purple Hairstreak** seems to be doing badly over the last four years, with numbers recorded a fraction of the numbers recorded back in 2008. However, this is another butterfly that is currently not properly monitored. Flight period from 24<sup>th</sup> June to 21<sup>st</sup> August.

**Green Hairstreak** from 15<sup>th</sup> April to 4<sup>th</sup> July. Total number recorded, slightly down on 2014, but still well above the lows of 2012-13. Except for 2012, peak numbers below 2010-14. Peak flight period 13 May, compared with 3-18 May for 2014.

**White-letter Hairstreak** from 26<sup>th</sup> June to 8<sup>th</sup> August, a slightly better year, but still only 38 recorded in 2015, and below the numbers recorded 2007-10.

**Long-tailed Blue** no sightings were reported despite a notable influx into southern counties.

**Small Blue** from 13<sup>th</sup> May to 23<sup>rd</sup> August, with one extraordinary confirmed late sighting on 27<sup>th</sup> September, which presumably represents a speculative third brood. Average numbers recorded, slightly down on 2014.

**Holly Blue** from 6<sup>th</sup> April to 29<sup>th</sup> September, with the second brood starting in the last week of June. There was an unusually late sighting on 25<sup>th</sup> October from a third brood. First brood peak numbers from 21<sup>st</sup> April to 24 May compared with just 18<sup>th</sup> April in 2014. A surprisingly great year, with approximately 3.5 times more recorded in 2015 than 2014, and well above previous peaks in 2004 and 2011.

**Silver-studded Blue** from 6<sup>th</sup> June to 8<sup>th</sup> August. Despite the loss of a colony at Ash Ranges due to arson in April, numbers seemed to better than 2014, but still well below the bumper year of 2010. Peak flight period 16<sup>th</sup> June to 25<sup>th</sup> July, about 7 days later than 2014, and about 8 days earlier than 2013.

**Brown Argus** 7<sup>th</sup> May to 23<sup>rd</sup> September, with peak numbers seen in August to early September. No records were received for Mitcham Common. Numbers still improving since the lows of 2012.

**Common Blue** an early sighting on 10<sup>th</sup> April, rest 18<sup>th</sup> April to 25<sup>th</sup> September, although the first generation didn't really kick-off until mid-May. Numbers still improving since the lows of 2012.

**Adonis Blue** was not recorded at Hackhurst or Newlands Corner, and reduced distribution at Box Hill. First brood 9<sup>th</sup> May to 24<sup>th</sup> June with peak flight period 10 days later than 2014, a larger second brood than 2014 flying 2<sup>nd</sup> August to 25<sup>th</sup> September. Numbers still improving since the lows of 2012, but still well below the bumper years of 2003-06 and 2010.

**Chalk Hill Blue** from 4<sup>th</sup> July to 30<sup>th</sup> September, with large numbers (100+) seen at Denbies Hillside and Pewley Down, during the first two weeks of August. Numbers better than 2014, but still well below the huge numbers seen in 2013. Peak flight period starting about 13 days later than 2014.

## Acknowledgments

Thank you to everyone who submitted records during 2015, with a record breaking number of records. This report would not have been possible without the dedication and hard work of all those people who recorded their sightings and sent them into one of the recording schemes. Verified records were received from the following recording schemes:

Survey	Records	Monads	Recorders
Big Butterfly Count	8,838	803	1,237
Branch website sightings	96	66	51
Brown Hairstreak transect	14	14	2
Butterflies for the New Millennium	5,282	361	64
iRecord Butterfly App	1,488	264	117
iRecord general data	1,622	178	51
iRecord Multi-site	57	15	6
Migrant Watch – Painted Lady	96	80	74
UK Butterfly Monitoring Scheme	29,633	149	103
Wider Countryside Butterfly Scheme	394	28	21
<b>TOTAL</b>	<b>47,520</b>	<b>1,162</b>	<b>1,559</b>

The Big Butterfly Count records provide a valuable addition to the dataset, and hopefully some recorders can be encouraged to submit records throughout the year. Details on how to submit your records on the Branch website.

The importance of occurrence data (distribution data) has been shown in recent scientific papers, and was the basis of the State of Butterfly Report 2015 (for the period 2010-14). The records have proved invaluable in the revision of the Regional Action Plan identifying changes in distribution over the years, and hence which butterflies are in greatest need of conservation.

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February 2016